

AMENDMENTS TO THE SUBSTITUTE SPECIFICATION

Please replace the third full paragraph on page 7 with the following amended paragraph:

A protein having an amino acid sequence described in SEQ ID NO:1~~SEQ ID NO:1~~ in the Sequence Listing and exhibiting a pesticidal activity.

Please replace the fourth full paragraph on page 7 with the following amended paragraph:

A protein having an amino acid sequence derived by addition, deletion or substitution of a plurality of amino acids in the amino acid sequence described in SEQ ID NO:1~~SEQ ID NO:1~~ in the Sequence Listing and exhibiting a pesticidal activity.

Please replace the sixth full paragraph on page 7 with the following amended paragraph:

The DNA as described in 3) above, containing a nucleotide sequence as described in SEQ ID NO:3~~SEQ ID NO:3~~ in the Sequence Listing.

Please replace the first full paragraph on page 8 with the following amended paragraph:

A noxious organism-controlling agent, comprising
a microbe producing a protein having an amino acid sequence described in SEQ ID NO:1~~SEQ ID NO:1~~ in the Sequence Listing, selected from

(1-1) *Bacillus thuringiensis* serovar *galleriae* SD502 strain,

(1-2) a mutant thereof, and

(1-3) a microbe transformed with a DNA containing a nucleotide sequence encoding a protein having an amino acid sequence described in SEQ ID NO:1~~SEQ ID NO:1~~ in the Sequence Listing, or

a protein having a pesticidal activity, produced by a microbe selected from

(2-1) the above-mentioned SDS502 strain,

(2-2) its mutant, and

(2-3) transformed microbe.

Please replace the last full paragraph on page 8 with the following amended paragraph:

Bacillus thuringiensis serovar galleriae SDS502 strain producing a protein having an amino acid sequence described in SEQ ID NO:1~~SEQ ID NO:1~~ in the Sequence Listing and exhibiting a pesticidal activity.

Please replace the third full paragraph on page 11 with the following amended paragraph:

The crystal protein of the present invention includes, in addition to those having the amino acid sequence as described in SEQ ID NO:1~~SEQ ID NO:1~~ in the Sequence Listing, also those having the one that is partly deficient (for example, a polypeptide composed of only a portion that is necessary for the expression of bioactivity out of the amino acid sequence as described in SEQ ID NO:1~~SEQ ID NO:1~~ in the Sequence Listing), those having the one partly substituted with other amino acids (for example, the one substituted by amino acids having

similar physical properties), and those in which other amino acids are added or inserted in some part thereof.

Please replace the first full paragraph on page 16 with the following amended paragraph:

From the above findings, the strain of the invention was judged to be a novel strain. This was named *Bacillus thuringiensis serovar galleriae* SDS502 and deposited on July 27, 2000, at Laboratory of Microbial Industry and Technology, Institute of Industrial Science Technology, Ministry of International Trade and Industry, (now National Institute of Advanced Industrial Science and Technology, Independent Administrative Institution) at AIST Tsukuba Central 6, 1-1, Higashi 1-Chome, Tsukuba-shi, Ibaraki-ken 305-8566 Japan under Accession No. FERM P-17979 and transferred to International Deposition under International Receipt No. FERM BP-7667.

Please replace the second full paragraph on page 17 with the following amended paragraph:

One platinum loop of SDS502 strain cells were taken out and inoculated in a test tube containing common bouillon medium (0.3% of meat extract, 1.0% of peptone, 0.5% of NaCl, pH 7.0/distilled water). Reciprocating shaking culture of it was performed at 30°C for 24 hours to obtain a seed culture solution. The seed culture was inoculated in a 500 ml Erlenmeyer flask containing 100 ml of the above-mentioned medium such that the seed culture was in a final concentration of 1% and rotation shaking culture was performed at 30°C for 96 hours at 250 rpm. Then, cells, spores and crystal protein were recovered by centrifugation. A suitable amount of

buffer (Tris-HCl (Tris(hydroxymethyl)aminomethane Hydrochloride), NaCl, EDTA) was added to the obtained precipitate and supersonic destruction was performed to obtain a suspension. The obtained suspension was subjected to 8% SDS-PAGE gel electrophoresis to examine its electrophoretic pattern. Also, using an antibody, Western blotting was performed. As result, it was confirmed that there existed a crystal protein having molecular weight of about 130 kDa produced by the SDS502 strain.

Please replace the paragraph bridging page 21 and 22 with the following amended paragraph:

To produce crystal protein using the SDS502 gene, *Escherichia coli* (*E. coli*: DH5 α) was transformed by use of the gene cassette (pSDS502) to obtain a recombinant *Escherichia coli* (hereinafter referred to as *E. coli*:DH5 α (pSDS502)). The recombinant *Escherichia coli* was incubated in LB-amp liquid medium (10 g of Trypton, 10 g of NaCl, 5 g of yeast extract, 0.2% of glucose, 50 mg/l of sterilized water of ampicillin) at 37°C for about 3 hours. Then, isopropyl 1-thio- β -D-galactoside (IPTG) was added thereto to a final concentration of 1 mM and the cultivation was continued for additional 20 hours at 37°C. After completion of the cultivation, the culture was centrifuged. Lysisbuffer was added to the precipitate in an amount of 4 folds (W/V) and the mixture was suspended at room temperature for 10 minutes. Then Lysozyme was added thereto to a final concentration of 1 mg/ml and after mixing, the mixture was left to stand on ice for 10 minutes. Further, ~~Triton X-100~~ TRITON™ X-100 Surfactant was added to this to a final concentration of 1% and after mixing, the mixture was centrifuged and the supernatant portion thereof was recovered. The obtained supernatant was subjected to 8% SDS-PAGE gel

Amendment under 37 C.F.R. § 1.116
Application No. 10/089,678

electrophoresis to examine its electrophoretic pattern. Also, Western blotting by use of an antibody was performed. As a result, it was observed that *E. coli*:DH5 α (pSDS502) produced a crySDS502 crystal protein.